

APPARATUS TO REDUCE BASE DRAG BEHIND BLUFF BODIES

ABSTRACT:

An improved method and device for reducing the base drag of bluff bodies, including large boxy highway vehicles such as semi-trailer trucks, which uses low drag vortex generators in combination with either a trailing panel or shortened boattail plates, to provide greater base drag reduction than other previously known methods. The preferred embodiment reduces the required length of boattail plates by over half, making it compatible with current U.S. regulations for trailer underride bars, and providing easier access for rear cargo doors. The device is easily installed as an add-on device on both new and existing truck bodies. In an alternate configuration, the shape of one or more sets of shortened boattail plates can be built into the rear body shape of vehicles, to maximize the interior volume for a given total vehicle length.